AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) An ablative composition, comprising:

an ablative material adapted to be applied to a surface;

an intumescent material intermixed with at least a portion of the ablative material to form the ablative composition ; and

wherein the ablative composition ~~forms~~ is adapted to form a thermal protection layer for the surface;

wherein the intumescent material is intermixed with only a portion of the thickness of a thermal protection layer ablative material.

2. (canceled)

3. (currently amended) The ablative composition of claim 1, wherein different quantities of said intumescent material are intermixed with said ablative material at different ~~thickness layers~~ depths with in the thermal protection layer of the ablative ~~material~~ composition.

4. (currently amended) The ablative composition of claim 3, wherein the intumescent material is intermixed in different quantities, and operable to be applied in successive layers to the surface, so that the ablative composition is operable to be formed by a series of layers with the layers each having a different concentration of said intumescent material mixed therein.

5. (currently amended) The ablative composition of claim 3, wherein the intumescent material is operable to be intermixed in different quantities, and operable to be applied in successive layers to the surface, so that the ablative composition is operable to be formed by a series of layers with an outermost layer having a maximum concentration of said intumescent material ~~mixed~~ intermixed therein.

6. (currently amended) The ablative composition of claim 1, wherein the intumescent material is between about 10 percent to 50 percent by weight of the ablative ~~material~~ composition.

7. (currently amended) The ablative composition of claim 1, wherein the intumescent material is between about 25 percent to about 30 percent by weight of the ablative ~~material~~ composition.

8. (currently amended) The ablative composition of claim 1, wherein the ablative composition is operable to form a layer that has an overall thickness of between about 0.05 inch (1.27mm) and 0.75 inch (19.05mm).

9. (currently amended) The ablative composition of claim 8, wherein the ablative composition is operable to form a layer that has an overall thickness of approximately 0.25 inches.

10. (original) The ablative composition of claim 1, wherein the intumescent material comprises ammonium polyphosphate.

11. (original) The ablative composition of claim 1, wherein the ablative material comprises a cork-based material.

12. (original) The ablative composition of claim 1, wherein the ablative material comprises epoxy.

13. (currently amended) An ablative composition comprising:

a first quantity of an ablative material ~~adapted~~ operable to be applied to a surface as a first ablative layer;

an intumescent material intermixed with a second quantity of said ablative material and operable to be applied as a second ablative layer on said first ablative layer; and

wherein said first and second ablative layers cooperatively form said ablative composition.

14. (currently amended) The ablative composition of claim 13, wherein the intumescent material comprises about 10 percent to about 50 percent of an overall weight of said ablative ~~material~~ composition.

15. (currently amended) The ablative composition of claim 13, ~~wherein~~ further comprising: a plurality of layers comprising said intumescent material and said ablative material ~~are formed to comprise the ablative composition~~.

16. (currently amended) The ablative composition of claim 15, wherein each of the plurality of layers comprising the intumescent material and the ablative material ~~are further formed to~~ include different concentrations of said intumescent material.

17. (currently amended) The ablative composition of claim 16, wherein of the plurality of layers comprising said intumescent material and said ablative material ~~are further formed such that~~ an outermost layer has a maximum concentration of said intumescent material.

18. (canceled)

19. (original) The ablative composition of claim 13, wherein the intumescent material comprises ammonium polyphosphate.

20. (original) The ablative composition of claim 13, wherein the ablative material comprises a cork-based material.

21. (original) The ablative composition of claim 13, wherein the ablative material comprises epoxy.

22. (withdrawn) An ablative substance comprising:

a first portion of ablative material forming an ablative layer;

an intumescent material intermixed with a second portion of said ablative material to form a intumescent/ablative sub layer, the intumescent/ablative sub layer comprising at least about 10 percent by weight of a total weight of said first and second portions of ablative material; and

wherein the intumescent/ablative sub layer is applied directly to said ablative layer.

23. (withdrawn) The ablative substance of claim 22, wherein the intumescent material comprises ammonium polyphosphate.

24. (withdrawn) The ablative substance of claim 22, wherein the ablative material comprises a cork-based material.

25. (withdrawn) The ablative substance of claim 22, wherein the ablative material comprises epoxy.

26. (New) The ablative composition of claim 16, wherein each layer of the plurality of layers has a successively greater concentration of said intumescent material, wherein an outermost layer has a maximum concentration of said intumescent material.